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chemical deposit, and has nothing whatever to do with the action of light.

When prints from the second and fifth negatives are combined stereoscopically the effect of relief is produced. In the interval of 73 seconds, the Moon has changed her place sufficiently to show that the corona is not an atmospheric phenomenon. If it had not happened that the great rift, occurring between the two prominences shown so distinctly in the American and my own photographs, had decided the solar origin of the corona, these two photographs would probably have been sufficient for the purpose.

On the Zodiacal Light. By A. C. Ranyard, Esq.

The conviction that the accumulation and comparison of evidence on a subject so interesting and yet so little understood as the zodiacal light cannot but be useful, induces me to submit the following observation to the notice of the Astronomical Society:—

On the evening of the 19th December last the detachment of the Eclipse Expedition encamped at Agosta had an opportunity of examining a particularly brilliant display of the zodiacal light, stretching to some 80° from the Sun's place: its contour was of a somewhat conical form, blunted at the apex, the semi-vertical angle of the cone being about 12°. Its light was apparently white, and was undistinguishable in point of colour from the light of the Milky Way, which also shone out with considerable distinctness upon the night in question. I was anxious to see if any polarization could be detected, and for this purpose made use of a Savart, and at first thought that faint lines were visible, indicating polarization in a plane through the Sun; but not being at all sure of my observation, I asked Mr. Burton, who was formerly assistant to Lord Rosse, and has very keen eyesight, to look through the instrument: he at once said that he distinctly saw bands brightest when the Savart was turned so that the direction of the bands passed through the Sun, and that the centre band was black; he also saw the bands perpendicular to the Sun's direction, but could not determine the nature of the centre one. I should mention that the Savart was so set as to give a black centre when the bands were parallel to the plane of polarization.

I then asked Mr. Burton to see if he could detect any bands upon the sky away from the zodiacal light, but he was unable to do so even at 90° away from the Sun's position.

I again took the instrument, but was unable to see any bands myself. On the next night the zodiacal light was again visible, but with considerably less brilliance than before. Father Secchi observed it with a Savart, and thought that he detected faint bands, but said that he could not be sure of his observation.

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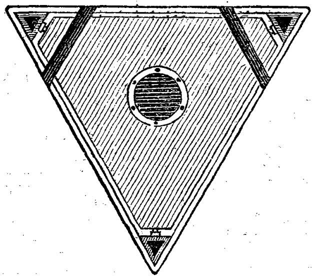
If other observations should confirm those of Mr. Burton we shall be in possession of proof, not only that the zodiacal light consists of matter which reflects the Sun's light, but that—

(1) That matter exists in particles so small that their diameters are comparable with the wave-lengths of light; or

(2) It consists of matter capable of giving specular reflection.

On a Contrivance for protecting the Observer when a Reflecting-Telescope of large size is used in the open air. By J. Browning, Esq.

It is generally admitted that reflecting-telescopes of large aperture perform most satisfactorily when they are used in the open air; the currents caused by convection, when the instrument is protected, through the slit of the dome of the observatory, being very prejudicial to good definition. But it is, of course, very desirable that the observer should be protected from winds and cold, particularly when measuring or drawing. I have contrived what I prefer to term "an observing-box," which I think will be found useful, inasmuch as it will afford complete protection to the observer under all circumstances.



The diagram which I shall now describe shows the principal details of this contrivance; but I have prepared a carefully executed model of the contrivance, so as to be able to exhibit the action to the members of the Society. In the diagram, A, A, A represent three triangular pillars, which are hollow. These are attached to B and C, two strong triangles, framed of quarterings. The observing-box D, which is also triangular, fits loosely between the three upright pillars, and runs in grooves, placed on the sides which face inwards. The weight of the observing-box is supported by three ropes, which run over the pillars P, P, P, attached to A, A, A. These are carried down the hollow pillars, and weights, which collectively must be heavier than the box and the observer, are suspended from them. In this manner the weight of the box is counterbalanced. A door in one side of the box enables the observer to enter when the box is near the ground. On the lower ledge of the opening in this door, at a convenient height, a desk slope is placed; this can be lowered on hinges, or raised, and kept in position by a turning bracket in the usual way. The observer sits in an ordinary chair, as it has been found more comfortable than any seat attached to the box. Two strong cords attached to bars running across the triangles A and B, are carried through small circular holes in the top and bottom of the observing-box, one on each side of the observer. To raise or lower himself, the observer has only to take hold of

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